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Rylander

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[54] **THINNED HALFTONE DOT PATTERNS FOR INKJET PRINTING**

[75] Inventor: **Richard L. Rylander**, Stillwater, Minn.

[73] Assignee: **Minnesota Mining and Manufacturing Company**, St. Paul, Minn.

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[52] **U.S. Cl.** **347/15**; 347/131; 347/183; 347/240; 358/298

[58] **Field of Search** 347/15, 43, 107, 347/131, 183, 251, 254, 240; 358/298, 534, 456; 382/257, 260, 302, 308

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Primary Examiner—Benjamin R. Fuller
Assistant Examiner—Craig A. Hallacher
Attorney, Agent, or Firm—Carolyn A. Bates; Steven J. Shumaker

[57] **ABSTRACT**

A set of thinned halftone dot patterns useful in inkjet printing comprises a plurality of halftone cells corresponding to respective shade values. Each of the halftone cells includes a plurality of addressable points, with at least some of the points being turned "on" to define a halftone dot pattern, and at least some of the "on" points defining a core component of the halftone dot pattern being selectively turned "off", thereby producing a thinned halftone dot pattern. The thinned halftone dot patterns enable the use of higher addressability in an inkjet printing system to achieve a wider range of shade values while avoiding undesirable over-inking of printed halftone dot patterns due to excessive overlap between printed ink spots. The thinned halftone dot patterns prevent significant overlap between adjacent ink spots in the core, or "interior", component when the halftone dot pattern is printed by the inkjet printing system, but preserves the entire edge component to maintain desired halftone cell definition. Thinned halftone cells can be stored in a memory as "glyphs" and retrieved by an inkjet printing system to print higher addressability halftone images with enhanced quality and a wider range of shade values.

26 Claims, 7 Drawing Sheets